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Siemens Coropration
Intellectual Property Department
170 Wood Avenue South
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EXAMINER

LE, JOHN H

ART UNIT PAPER NUMBER

2863

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/538,153

Applicant(s)

GEYER ET AL.

Examiner

John H. Le

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 06/08/2005 (preliminary amendment).
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-26 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 14-26 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 08 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/08/05
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-40 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claimed invention as a whole must accomplish a practical application.

That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S.519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993).

A process that consists solely of the manipulation of an abstract idea is not concrete or tangible. See In re Warmerdam, 33 F.3d 1354, 1360, 31 USPQ2d 1754, 1759 (Fed. Cir. 1994). See also Schrader, 22 F.3d at 295, 30 USPQ2d at 1459. Nor can one patent "a novel and useful mathematical formula," Flook, 437 U.S. at 585, 198 USPQ at 195; electromagnetism or steam power, O'Reilly v. Morse, 56 U.S. (15 How.) 62, 113-114 (1853). To view the new guidelines for 35 U.S.C. 101, please view the following OG notice.

<http://www.uspto.gov/web/offices/com/sol/og/2005/week47/patgupa.htm>

Regarding claim 14, it appears to be to an abstract idea rather than a practical application of the idea. Claim 1 does not provide a tangible result. Therefore, claim 14 appears non-statutory.

Regarding claim 26, the device to be able to realize any functionality, at least one element must necessarily include hardware. The claim does not show any hardware for performing. Therefore, the software itself would make it non-statutory. Thus, the claim appears to lack a tangible result. Therefore, claim 26 appears non-statutory.

Claims 15-25 are rejected under 35 U.S.C. 101 base on dependency.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 14-15, 19, 20, 25, and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Bayerle et al. (USP 6,973,777).

Regarding claim 14, Bayerle et al. teach a method for monitoring a control unit (11) of an internal combustion engine (10)(e.g. Fig.1, Col.4, lines 22-49), comprising: monitoring a variable that characterizes the output of a lambda regulating system (lambda probes 19, 20) for a deviation from a predefined reference value (e.g. Col.4,

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lines 50-67); and detecting an error by a control element determining the air mass in the cylinder as a function of the deviation that has been determined (e.g. Col.4, lines 38-43, Col.5, line 20-Col.6, line 16).

Regarding claim 15, Bayerle et al. teach the variable that characterizes the output parameter of a lambda regulation system is the output parameter (e.g. Col.4, line 56-Col.5, line 2).

Regarding claim 19, Bayerle et al. teach the variable that characterizes the output parameter of the lambda regulation system depends on the derivation in time of the output parameter of the lambda regulation system (e.g. Col.4, lines 37-44).

Regarding claim 20, Bayerle et al. teach the variable that characterizes the output parameter of the lambda regulation system is a value of an air mass flow determined from the injection parameters in the cylinders of the internal combustion engine (e.g. abstract, Col.2, lines 63-67).

Regarding claim 25, Bayerle et al. teach the variable that characterizes the output parameter of the lambda regulation system depends on a value of an air mass flow determined from the injection parameters in the cylinders of the internal combustion engine (e.g. abstract, Col.2, lines 63-67, Col.4, lines 35-37, Col.5, lines 33-36, lines 44-47).

Regarding claim 26, Bayerle et al. teach a device for monitoring a control unit for an internal combustion engine (e.g. Fig.1, Col.3, lines 1-3), comprising: a monitoring unit (microcomputer, Col.4, lines 37-43); and a variable according to the monitoring unit that characterizes an output parameter of a lambda regulation system (lambda probes

19, 20) and is monitored for a deviation from a predefined threshold value (e.g. Col.4, lines 50-67) and an error is detected by a control element determining the air mass in the cylinder as a function of the deviation that has been determined (e.g. Col.4, lines 38-43, Col.5, line 20-Col.6, line 16).

Allowable Subject Matter

5. Claims 16-18, 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and rewritten or amended to overcome the rejection(s) under 35 U.S.C. 101, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 16, none of the prior art of record teaches or suggests the combination of a method for monitoring a control unit of an internal combustion engine, comprising: monitoring a variable that characterizes the output of a lambda regulating system for a deviation from a predefined reference value; and detecting an error by a control element determining the air mass in the cylinder as a function of the deviation that has been determined; wherein the variable that characterizes the output parameter of a lambda regulation system is the output parameter; and wherein the deviation of the value of the output parameter is compared with a predefined desired value of the output parameter, the deviation is summed, and an error is detected if the summed deviation exceeds a predefined threshold value. It is these limitations as they are claimed in the

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combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 21, none of the prior art of record teaches or suggests the combination of a method for monitoring a control unit of an internal combustion engine, comprising: monitoring a variable that characterizes the output of a lambda regulating system for a deviation from a predefined reference value; and detecting an error by a control element determining the air mass in the cylinder as a function of the deviation that has been determined; wherein the variable that characterizes the output parameter of the lambda regulation system is a value of an air mass flow determined from the injection parameters in the cylinders of the internal combustion engine; and wherein the value of the air mass flow determined from the injection parameters is determined as a function of a start of injection and an end of injection signal that are generated by the control unit. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Other Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Zhang et al. (USP 6,189,524) disclose a method and device for monitoring an internal combustion engine.

Contact Information

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H. Le whose telephone number is 571 272 2275.

The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571 272 2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

August 2, 2006



MICHAEL NGHIEM
PRIMARY EXAMINER